

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS

1.(New) A method of treating waste matter from animals, the method comprising:

- a) collecting waste matter from the animals;
- b) inhibiting urease activity in said collected waste matter; and
- c) separating said urease-acti-vity inhibited waste matter into a urea-rich fraction essentially consisting of a liquid comprising urea and other components soluble in liquid manure and a urea-lean fraction;

wherein said inhibition comprises reversible inhibiting urease activity of said collected waste matter before said separa-tion of said urease-acti-vity inhibited waste matter into said urea-rich fraction and said urea-lean fraction.

2. (New) The method according to claim 1 wherein said inhibition comprises irreversibly inhibiting urease activity.

3.(New) The method according to claim 1 wherein said inhibition comprises a reversible inhibition of urease activity comprising treating said collected waste matter, said urea-rich fraction, or both, by a method comprising: decreasing and/or increasing pH; buffering pH; decreasing and/or increasing temperature; decreasing and/or increasing pressure; decreasing and/or increasing ionic strength, or a combination thereof.

4. (New) The method according to claim 2, wherein said inhibition comprises a irreversible inhibition of urease activity comprising treating said collected waste matter, said urea-rich fraction, or both, with an irreversible inhibitor, said inhibitor being selected among the group comprising:

urea compounds such as hydroxyurea, seleno-urea, phenylurea, thiourea;

hydroxamates such as amino acid hydroxamates, aceto-hydroxamate;

benzoates such as p-substituted mercuribenzoate, p-chloro-mercuribenzoate, p-hydroxymercuri-benzoate, iodosobenzoate;

sulfonates such as p-chloromercuribenzene-sulfonate;

imides such as N-ethylmaleimide;

phosphor compounds such as phosphoramidate, phosphate;

monovalent ions such as F^- , Na^+ , and K^+ ;

divalent metal ions such as Hg^{2+} , Cu^{2+} , Fe^{2+} , Co^{2+} , Zn^{2+} , Ni^{2+} , Mn^{2+} , Cd^{2+} , Ag^+ , Mg^{2+} (weak), Ba^{2+} ,

preferably Cu^{2+} , Ag^+ , or Pb^{2+} , or a combination thereof in form of at least one water-soluble salt, and/or at least one electro-chemically-released ion;

trivalent ions such as As^{3+} ; and

at least one nickel-complexing agent, preferably dimethyl-glyoxime, ethylenediamine, EDTA, or a combination thereof, and

other compounds such as beta-mercaptoethanol, iodine, suramin, phenylsulfinate, and furacin.

5.(New) The method according to claim 1, said method comprising:

- a) reversibly inhibiting urease activity in said collected waste matter;
- b) separating said reversibly urease-activity inhibited waste matter into a urea-rich fraction and a urea-lean fraction; and
- c) irreversibly inhibiting urease activity in said urea-rich fraction.

6. (New) The method according to claim 5, wherein said urea-lean fraction is in form of a liquid, a solid, or a combination thereof, or in form of a dried solid.

7.(New) The method according to claim 4, wherein said irreversible inhibitor is recovered from said irreversibly urease-activity inhibited and separated urea-rich fraction.

8.(New) The method according to claim 1, wherein said waste-matter comprises faeces and liquid manure from farm animals.

9. (New) A urea-rich animal waste-matter product, the product comprising urea produced from a urea-rich fraction of waste matter from animals wherein the waste matter has been treated by a method as defined in claim 1, said urea-rich animal waste-matter product exhibiting a re-versible inhibition of urease catalytic activity.

10. (New) The product according to claim 9 wherein said urea-rich fraction exhibits substantially no urease activity, preferably less than 50 unit/ml, more preferred less than 20 unit/ml, most preferred less than 5 unit/ml.

11.(New) The product according to claim 9 , wherein said urea-rich fraction exhibits minor residues of irreversibly urease-activity inhibitors.

12.(New) The product according to claims 9, the product comprising animal waste-matter indicators, preferably Na⁺, K⁺, Ca²⁺, PO₄²⁻, bilirubin, albumin, uric acid in ranges 200 mmol/l to 5 mmol/l.

13.(New) A method of producing urea-formaldehyde from waste matter of animals, the method comprising:

a) producing a urea-rich fraction of the waste matter from the animals by a method comprising:

i) collecting waste matter from the animals;

ii) inhibiting urease activity in said collected waste matter; and

iii) separating said urease-acti-vity inhibited waste matter into a urea-rich fraction essentially consisting of a liquid comprising urea and other components soluble in liquid manure and a urea-lean fraction; said inhibition comprising reversible inhi-biting urease activity of said collected waste matter before said separation of said urease-acti-vity inhibited waste matter into said urea-rich fraction and said urea-lean fraction; and

b) reacting said urea-rich fraction with methanal.

14.(New) The method according to claim 13, wherein said waste matter comprises faeces and liquid manure from farm animals.

15. (New) The method according to claim 2, wherein said inhibition comprises a reversible inhibition of urease activity comprising treating said collected waste matter, said urea-rich fraction, or both, by a method comprising: decreasing and/or increasing pH; buffering pH; decreasing and/or increasing temperature; decreasing and/or increasing pressure; decreasing and/or increasing ionic strength, or a combination thereof.

16. (New) The product according to claim10, wherein said urea-rich fraction exhibits minor residues of irreversibly urease-activity inhibitors.